# BT Total Broadband
# User guide and troubleshooting

For set-up, follow **Getting Started** guide



For online help, go to
www.bt.com/help

# Contents

To install your BT Home Hub 3, please follow your handy **Getting Started** guide.

This **User guide** contains more detailed information and help.


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**Getting up to speed**
For the first ten days or so, your broadband might slow down or even stop now and again. That's normal. It takes that long for your broadband to reach its top speed. You can help it along by leaving your Hub on all the time, and using your broadband as much as you can for the first ten days. If you've got questions about the speed of your broadband after that, go to **www.bt.com/help/broadbandspeed**

# Get some help

www.bt.com/help

Use these pages to find out where to get lots of help online or if you need some help fixing a connection problem. There's also connection troubleshooting on page 30.

## Online help

There's no need to call and maybe wait in a queue if you're online and need some help or advice. Simply go to **www.bt.com/help**

### Other ways to get help

Run BT Broadband Desktop Help – see below

Advice, tutorials, common questions and videos: go to **www.bt.com/start**

Tips from other users in our forums: go to **www.bt.com/community**

Connecting other computers and devices: go to page 4.

Connection troubleshooting: go to page 30.

## Desktop help – new and better than ever

BT Broadband Desktop Help (PCs only) is included with your BT Total Broadband service. It's a tool that identifies problems with your broadband, email or wireless connection. Once it's installed on your computer, it continually checks your broadband connection. If there's a problem, BT Broadband Desktop Help automatically pops up to help fix it.

To open desktop help, just double-click on your desktop or download it straight to your computer from **www.bt.com/help/broadbanddesktophelp**

### BT Broadband Desktop Help will:

- alert you if you have a problem
- support you 24 hours a day
- help you get back online
- run a PC health check
- set up or troubleshoot your BT email account
- fix problems in the background
- help you set up your home network
- update automatically

Note: BT Broadband Desktop Help only works with PCs using Windows 7, Vista or XP. Sorry, it doesn't work with Macs. If you use a Mac, please try other help options in this guide.

Once connected, your new broadband connection means faster help, if you need it. Just go to **www.bt.com/help**

If you still have problems connecting, see page 30.

### Help with computer problems

While the other help listed here focuses on your broadband and Hub, our BT Home IT Support team can offer you straightforward, jargon-free help with a wide range of computer-related issues. You can get help over the phone[1] or in person[2].

To find out more, go to **www.bt.com/homeitsupport**

### Your bill explained

After your order, you might get an interim bill that's bigger than you expected. If you're an existing customer, you might see charges for some of your old service as well as the new.

To find out more about your bill, go to **www.bt.com/mybt**

1 12-month subscription £9 a month. We might not be able to fix some technical problems. Policy on fair use applies. Exclusions, terms and conditions apply.
2 Engineer visits: charges start from £90.

Prices shown include VAT at 20%. VAT rate and prices may change. See www.bt.com for the latest prices.

# Connect other computers and devices

## How to connect other computers or devices using the CD

Set-up will have helped you connect your main computer to BT Total Broadband, but if you'd like to connect any other computers or devices, simply run your CD on the computer or device and follow the CD's set-up wizard. It's the easiest way to connect other devices.

**My CD won't run. What should I do?**
PC users: click on **My Computer** in the Windows Start menu, right-click your CD icon, then click **BT Home Hub Setup**.

Mac OS users: double-click the BT Total Broadband desktop icon, then double-click **setup.app**.

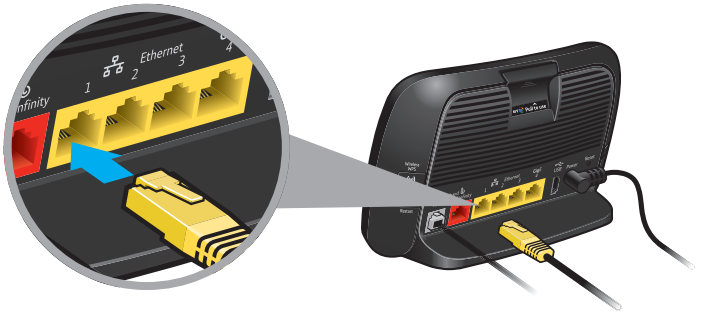
How can I find out if my computer or device works with wireless?
See page 25.

# How to connect other computers or devices that don't use a CD

### If you've a wired device

Simply plug its Ethernet cable into one of the spare Ethernet (yellow) ports on the back of your Hub.

We suggest you use an Ethernet connection if your computer or device is usually near your Hub.




### If you've a wireless device such as a laptop, netbook, smart phone or games console

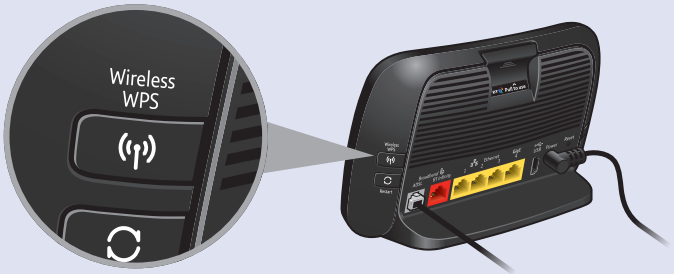
Use its wireless feature to connect to your Hub. You'll need your Hub's wireless network name and wireless key. You can find these on your Hub's handy pull-out (see page 10). There's also a space on page 43 for you to keep a note of these details. Once you've found these, follow the instructions that came with your device – for the Hub, read on.

If you're trying to connect a computer or a device, turn on its wireless – there's usually some sort of switch. Then try hovering your mouse or cursor over the icons in your computer's system tray or status bar, and look for a wireless icon. If you're using Windows Vista or XP, you can also try clicking Start then Connect to... .

If your computer's got a wireless connection, find your Hub's wireless network name in any list displayed (it will start with 'BTHub3...'), highlight it and click Connect. If you need to, type in your Hub's wireless key.

**An even easier way to connect devices**

Your clever new Hub has a **WPS** (wi-fi protected set-up) button. What's that mean? It means all you have to do to connect a WPS-enabled device or a PC (running Windows 7 or Windows Vista with Service Pack 2) is find your Hub's network name using the device or PC you're trying to connect to broadband – and when you've found and highlighted it and clicked **Automatically connect**, press the **WPS** button on your Hub within two minutes. Some devices may need you to press a button.




To find out more about WPS, go to **www.wi-fi.org/wifi-protected-setup**

**You may need these techy details:**

| | |
|---|---|
| Authentication type: | WPA2-PSK or WPA-PSK |
| Encryption type: | AES (WPA2) or TKIP (WPA) |
| Mode: | infrastructure (not ad hoc) |

# What to do if you have a problem connecting your computer to your Hub

If the computer's never been connected to the Hub before, see your **Getting Started** guide.

Check the Hub lights table and troubleshooting on page 30. If the Broadband light is blue, broadband to your Hub is okay. If your computer can't connect, these tips may help.

1 If you haven't already, press the **Restart** button on your Hub and then try restarting your computer. This often gets connections up and running again.

2 If you're trying to get to a certain web page, try getting a different web page. The problem may be with the web site you're trying to get.

3 If you're using a firewall, check it isn't blocking your web browser's connection to the internet. Try temporarily turning off your firewall and then restarting your browser. If you can now get on the internet, there's a problem with your firewall settings. To fix this problem, see your firewall's help information.

### If your computer's connected using an Ethernet cable (yellow ends)

Check that this cable is plugged in correctly by unplugging and plugging back in each end.

Or try plugging the Ethernet cable into one of the other yellow Ethernet sockets on the back of your Hub.

### If you're using wireless, many things can affect a wireless connection

You could have a problem with interference on your wireless signal, your computer settings or where your computer and Hub are in your home. These tips may help.

- Check that your computer's wireless is turned on. Some laptops have a small switch – please see your computer manual for help
- If you're using a wireless adapter, check it's correctly installed and connected
- Check your wireless connection software – it should show if your computer's connected to your Hub. Try hovering your mouse or cursor over the icons in your computer's system tray (usually on the lower right-hand corner of the screen) – one of these may show if your wireless is connected. Click or right-click on this to launch wireless manager

If you still can't get a wireless connection...

- Try moving your computer closer to your Hub
- Move your computer and Hub away from large electrical appliances
- Temporarily turn off other wireless devices in your home, such as wireless TV/video senders, security cameras and baby monitors

Note: if your computer has an Ethernet port, try plugging in the Ethernet cable. This may help you to get online. For more help with fixing connection problems, go to **www.bt.com/start**

If you still have problems connecting, see page 30.

### Change wireless channel

Your Hub is always monitoring the wireless channel it's using and if it detects too much interference, it will automatically change to another channel. If you want to refresh a channel, follow the steps below. Or you can manually change to a channel of your choice – but this will stop the automatic channel selection feature.

Open BT Broadband Desktop Help by double-clicking on your desktop. Click PC Healthcheck, then the wireless tab and follow the instructions to change wireless channel.

If you can't use desktop help, you can manually change wireless channels using the steps below. You'll need a computer connected to the Hub to access your Hub Manager.

1. Access Hub Manager by typing **bthomehub.home** into your web browser.
2. Click Settings.
3. If asked, enter your Hub Admin password or set your own new password. You'll find your Hub Admin password on the bottom of your Hub.
4. In the Basic Settings menu, click Change the wireless channel to avoid interference.
5. Click the Refresh button.
6. Wait a minute for your device to pick up the new channel.

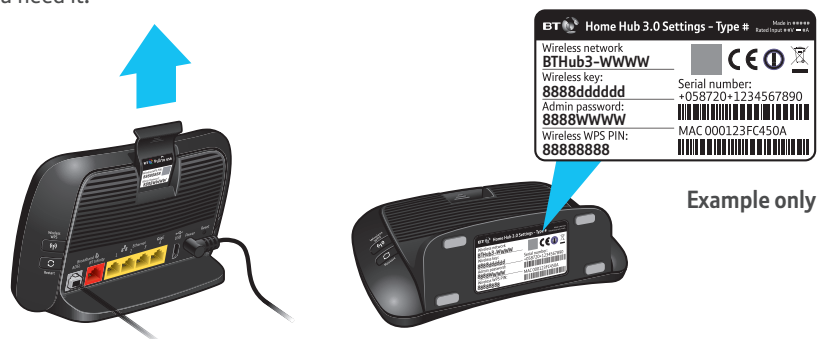
# About your Hub

## Hub Manager

Your BT Home Hub 3 is like a computer. It has its own software running, which controls how it works and what it does. You can change your Hub's settings using your Hub Manager – simply open your web browser and type **bthomehub.home** in the address bar.

Access to your Hub Manager is secured using a password. When accessing the Hub Manager for the first time, you'll be asked to enter the Admin password – see your Hub's handy pull-out. You will then be asked to enter a new password of your choice. There's some space on page 43, if you'd like to write it down.

You can also enter a password hint that can help you remember your password when you need it.




**Example only**

If you can't remember your Admin password, you can use the Password Override feature. When you're in Hub Manager, press the Password Override button. Then press and hold the WPS button for about 20 seconds and you'll then need to enter the wireless key (see your Hub's pull-out) as the username, and the serial number (see under Hub) as the password. You'll then need to enter a new password as if you were accessing the Hub Manager for the first time.

## Hub sockets summary

| | |
|---|---|
| Broadband: ADSL socket (grey) | connects your Hub to your broadband line via an ADSL filter |
| Broadband: BT Infinity socket (red) | only for BT Infinity and fibre optic products |
| Ethernet sockets (yellow) 1–4 | connection (no. 4 is a GigE port, which is used for high-speed devices like network attached storage (NAS) drives and high spec computers) |
| USB socket | for connecting USB 2.0 memory devices |
| Power socket | connects your Hub to mains power using the Hub's power cable |

## Hub features

Your Hub offers a wide range of features, many of which aren't needed for day-to-day use. Power Save mode and Access controls are popular everyday features that you may find useful.

## BT Power Save

Your Hub 3 comes with Power Save, which means it goes into sleep mode if there's been no activity for over five minutes. All lights will be dimmed and your Hub will wake up as soon as you need it.

You can also set a manual Power Save to turn off wireless between preset times of the day. You do this through your Hub Manager (the Power light will then be orange).

To find out more about your Hub features, go to **www.bt.com/help/homehub**

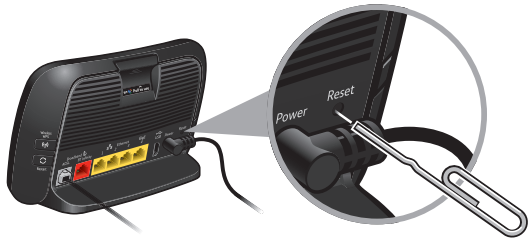
## Resetting your Hub

**WARNING:** resetting your Hub means you'll lose any changes that have been made to your Hub settings.
**Tip:** you can back up your settings before you reset your Hub. To find out more, go to **www.bt.com/help**

To reset your Hub to its factory default settings, removing all personal settings:

1 use a pin or paperclip to press and release the **Reset** button on the back of your Hub. All Hub lights will go out

2 wait for the Hub's Broadband light to glow blue – this may take several minutes




3 reset any changes that you made before in Hub Manager

This may include:
- reactivating BT FON – go to **www.btfon.com**
- resetting any wireless settings that you changed
- resetting your Hub Admin password and any Hub Manager changes

## What to do with an old Hub

If you've got a new Hub as a replacement for a faulty one, please return the faulty one with its power cable using the returns envelope sent with the replacement.

If you don't have a returns envelope or you've other old electrical equipment you'd like to dispose of, please follow your local authority's recycling advice.

Before disposing of any such equipment, we recommend you reset it to its default settings – this should remove all your personal settings. To find out how to reset your Hub to its default settings, see above.

For more help, please go to **www.bt.com/help**

# Common questions

Use this section to find answers to some of the most common questions.

**Contents**


| | |
|---|---|
| Connecting your Hub or router | 13 |
| Using ADSL filters | 22 |
| Working with wireless | 25 |
| Broadband speed and phone line | 28 |
| Other common questions | 29 |


## Connecting your Hub or router

### Q When should I start setting up my BT Home Hub?

You can start setting up your Hub at any time – but please bear in mind that your new broadband line may not be activated until midnight on your activation day. We'll show you during set-up how to tell if your service is active.

If you're moving an existing broadband connection to BT, it will stop working. When this happens, you can start setting up your Hub.

If you're already using BT Total Broadband, you can set up your Hub whenever you want as your line's already active.

## Q I want to replace my existing BT Home Hub, BT Voyager or other modem/router with my new Hub. What do I do to set it up?

**To replace:**

- an existing BT Home Hub, go to **A**
- an existing BT Voyager router, go to **B**
- another modem/router, go to **C**

### A Replace an existing BT Home Hub

1. Make a note of any changes you've made to your Hub Manager settings before unplugging your existing Home Hub, as you'll need to make these changes again with your new BT Home Hub 3. If you aren't sure what this means, don't worry, just go to the next step.
2. Turn off power to your Hub and unplug its power cable at the mains power socket.
3. Unplug the Broadband cable (grey ends) from your Hub's broadband socket as well as from its ADSL filter. If you got new filters with your new Hub, we suggest you use them. If not, leave the existing filter plugged into its phone socket.
4. If your Hub's connected using Ethernet cable(s) (yellow ends) – unplug them. If your Hub's connected using wireless, we'll show you how to sort this out later.
5. Set aside this old Hub and the cables you've just unplugged.
6. Follow your **Getting Started** guide to set up your new BT Home Hub 3. If you got new cables with your new Hub, use them – not your old Hub's cables.

Here's a checklist of other things to do once you've got your new BT Home Hub up and running:

- if you connect any devices to your Hub using wireless, you'll need to set these up again using your new Hub's wireless network name and key. Please see page 17
- if you're a member of BT FON, simply opt out and opt in again. Please go to **www.btfon.com**
- you may also now want to redo any changes you made in Hub Manager. See page 10

If you've received your new Hub as a replacement for a faulty one, please return the faulty one using the returns envelope sent with the replacement.

### B Replace an existing BT Voyager router

1. Turn off power to your router and unplug its power cable at the mains power socket.
2. Unplug the DSL cable from your router's DSL socket as well as from its ADSL filter. If you got new filters with your new Hub, we suggest you use them. If not, leave the existing filter plugged into its phone socket.
3. If fitted, unplug the 'phone line' cable and any telephone from your router (Voyager 220v and 2500v only).
4. Unplug the Ethernet or USB cable from your router.
5. Set aside this old Hub and the cables you've just unplugged.
6. Follow your **Getting Started** guide to set up your new BT Home Hub 3. If you got new cables with your new Hub, use them – not your old router's cables.

For information on disposing of electrical equipment, see page 45.

### C Replace another modem/router

If your computer has a built-in modem or router, unplug the cable between your computer and the phone socket.

If your computer connects to a separate modem/router:

1. turn off your modem/router
2. unplug any cables between your modem/router, computer, the phone socket and the mains power socket. You can leave any ADSL filters in phone sockets
3. set aside the old modem/router and cables
4. follow your **Getting Started** guide to set up your new BT Home Hub 3

For information on disposing of electrical equipment, see page 45.

## Q I want to continue using my existing modem/router. What do I need to do to connect to BT Total Broadband?

We recommend that you use the BT Home Hub 3 to get the most out of your BT Total Broadband service. But if you're going to be using another type of modem or router, please follow its set-up instructions. You may need the following information:

| | |
|---|---|
| Connection, PPP or username: | broadband.user@btbroadband.com |
| Password: | None required* |
| Encapsulation: | PPPoA or PPP over ATM |
| Multiplexing: | VC-based or VC Mux |
| VPI/VCI: | 0/38 |

* When connecting your BT Home Hub 3 to the BT Total Broadband network, it doesn't need a connection password. However, some other routers do need one – try 'password', and confirm.

Once you've successfully connected to the internet, you're ready to continue your set-up and explore BT Total Broadband's great features, including security, email and more. Please go to **www.bt.com/start**

## Q I have BT Reach. What do I need to know?

Your BT Reach equipment, with Broadband Enabling Technologies (BET) will be installed by your BT engineer. It needs to be fitted close to a permanent power supply. For more information, go to **www.bt.com**

## Q How do I make a connection to my computer without using the CD?

The steps to follow are slightly different depending on what you're connecting (e.g. a computer, games console or other device) and how you're going to connect it (i.e. whether you're going to use wireless or the Ethernet cable).

**Choose what you want to connect. I want to connect my:**

- computer using wireless – go to **A** on page 17
- games console or other device using wireless – go to **B** on page 19

- computer using the Ethernet cable – go to **C** on page 19
- games console or other device using the Ethernet cable – go to **D** on page 20

If you aren't sure whether to use wireless or the Ethernet cable, see 'Learn about...' in your **Getting Started** guide.

## A I want to connect my computer using wireless

1 If your computer's already connected to your Hub using an Ethernet cable, unplug this cable.

2 Place your computer close to your Hub for a good wireless signal.

3 If you use a wireless adapter with your computer, check it's installed and connected using the adapter manufacturer's instructions. If you're using a laptop with built-in wireless, turn on wireless by either using the wireless switch (if your computer has one) or activating wireless from within your wireless software. Your wireless adapter must be 802.11b/g or n compliant.

If your computer isn't wireless enabled or you don't have a wireless adapter, see page 27.

4 Find your Hub's wireless network name/SSID and wireless key. These are on your Hub's handy pull-out.

**You may need these techy details:**

| | |
|---|---|
| Authentication type: | WPA2-PSK or WPA-PSK (also known as WPA-Personal) |
| Encryption type: | AES (WPA2) or TKIP (WPA) |
| Mode: | infrastructure (not ad hoc) |

5 Follow the instructions below for your computer's operating system. If your wireless adapter has its own software, use it to set up your wireless connection (your software's 'help' section may be useful if you aren't sure how to do this).

| Windows XP/Vista | Windows 7 | Mac OS X |
|---|---|---|
| 1 Go to Start, click Connect To.<br>**XP**: click Wireless Network Connection.<br>**Vista**: click Connect to network.<br>2 Highlight your Hub's network name (checking that the last four digits match your Hub's details, e.g. BTHub3-2345) and click Connect.<br>3 Type your Hub's wireless key into the:<br>**XP**: Network Key box.<br>**Vista**: Security key or passphrase box.<br>4 Click Connect and wait a few moments while your computer connects to your Hub. | 1 Go to Start, click Control Panel then click Network and Internet, followed by Connect to a network.<br>2 Click on your Hub's network name (checking that the last four digits match your Hub's details, e.g. BTHub3-2345) and click Connect.<br>3 Either:<br>Press the WPS button on the rear of your Hub<br>Or:<br>Type your Hub's wireless key into the Security key box then click OK<br>4 Wait a few moments while your computer connects to your Hub. | 1 Click the AirPort Status icon in the menu bar.<br>2 Click your Hub's network name (checking that the last four digits match your Hub's details, e.g. BTHub3-2345).<br>3 Mac OS X 10.4 and earlier only: in the Wireless Security box, select WPA Personal.<br>4 Type your Hub's wireless key into the Password box.<br>5 Click OK and wait a few moments while your computer connects to your Hub. |


> If your computer shows the message 'Windows cannot configure this wireless connection', see page 26
> If your computer's wireless function or adapter doesn't have a WPA/WP2 option, see page 25
> If your Hub's wireless network name doesn't appear, or you're having problems connecting to your Hub, see the lights table on page 30

6 Open your web browser – you should be on the internet. If you can't connect to the internet, please restart your computer and try these steps again – or follow any related on-screen troubleshooting instructions.

If a dial-up window appears, see page 21.

7 **Congratulations** – you're now connected to BT Total Broadband using your BT Home Hub. To continue set-up and explore BT Total Broadband's great features, including security, email and more, go to **www.bt.com/start**

### B I want to connect my games console or other device using wireless

Find your Hub's wireless settings on your Hub's pull-out and type them into your wireless device when asked. Then simply follow your device's wireless set-up instructions. You shouldn't need to make any changes to your Hub – the connection should start working straight away.

For detailed instructions on most games consoles and popular wireless devices, go to **www.bt.com/start**

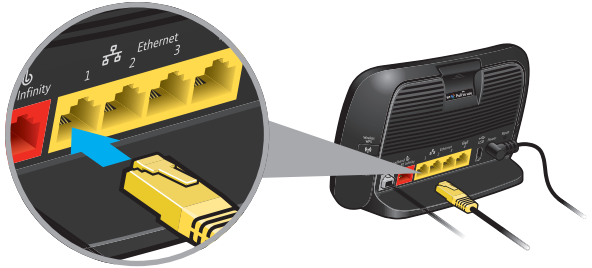
If your device doesn't support WPA connection, see 'How do I change my Hub to accept WEP wireless connections?' on page 25.

### C I want to connect my computer using the Ethernet cable

1 Check that your computer has a spare Ethernet port. This is a small socket on the back or side of your computer and is usually marked LAN, Ethernet, or . If you aren't sure, check the information supplied with your computer.

If you don't have an Ethernet port, see page 21.

2 Plug one end of the Ethernet cable (yellow ends) into one of your Hub's yellow Ethernet sockets.




3 Plug the other end of the Ethernet cable into your computer's Ethernet socket.

4 Open your web browser – you should be on the internet. If you can't connect to the internet, please restart your computer and try these steps again – or follow any related on-screen troubleshooting instructions.

> If a dial-up window appears, see page 21
> If you still have difficulty connecting to the Hub, see the lights table on page 30

5 **Congratulations** – you're now connected to BT Total Broadband using your BT Home Hub. To continue set-up and explore BT Total Broadband's great features, including security, email and more, go to **www.bt.com/start**

## D I want to connect my games console or other device using the Ethernet cable

If your device has an Ethernet connection, simply plug it into your Hub using an Ethernet cable. You shouldn't need to make any changes to your Hub – the connection should start working straight away.

One of your Hub's Ethernet sockets is set up for GigE. This means data can move faster through it than the other Ethernet sockets. We suggest you use this socket if you're connecting a NAS (network attached storage) device to your Hub.

For detailed instructions on most games consoles and popular wireless devices, go to **www.bt.com/start**

## Q I don't have an Ethernet port. Can I still connect to the Hub using a cable?

You can use an Ethernet (wired) or wireless connection with your Hub. If your computer doesn't have an Ethernet port, you can add one by using a USB to Ethernet adapter or, for a desktop computer, a PCI Ethernet card. You can buy an adapter or card at a computer shop or **www.bt.com/shop**

## Q What do I do if a dial-up networking window appears when trying to connect to the internet?

### Windows XP/Vista

1. Go to Start and click Control Panel then click Internet Options
2. Click the Connections tab
3. Select Never dial a connection
4. Click LAN Settings...
5. Tick Automatically detect settings
6. Click OK twice

### Windows 7

1. Go to Start and click Control Panel then click Network and Internet, followed by Internet Options
2. Click the Connections tab
3. Select Never dial a connection
4. Click LAN Settings...
5. Tick Automatically detect settings
6. Click OK twice

### Mac OS X

1. Open System Preferences then Network to show: Network Port Configurations
2. Drag Internal Modem to the bottom of the list, or 'untick' it to make it inactive

Once you've successfully connected your computer to the internet, you're ready to continue your set-up and explore BT Total Broadband's great features, including security, email and more. Please go to **www.bt.com/start**

# Using ADSL filters

## Q I already have ADSL filters. Do I need to change them over?

You can leave your existing filters in place or replace them with the new ones sent with your Hub. It's up to you.

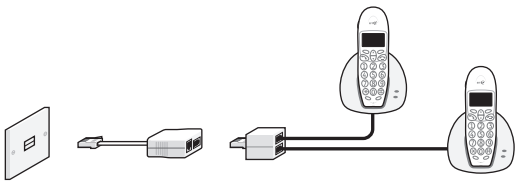
## Q What do I do if I don't have enough ADSL filters?

You can get ADSL filters from **www.shop.bt.com/microfilters** or most high street computer shops.

If you don't have enough filters, but want to set up broadband, you should unplug any device without an ADSL filter from its phone socket. You can reconnect the device once you've an ADSL filter for it.

## Q Can I connect more than one phone to an ADSL filter?

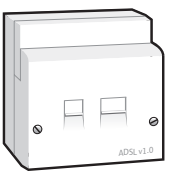
Yes. If you use a phone socket doubler, you can connect more than one phone to a single ADSL filter, as shown here.



## Q I have an ADSL master socket. Do I still need to use ADSL filters?

No. When you get to **Getting Started** guide step 4, you'll simply plug your broadband cable straight into the ADSL master socket's DSL socket.

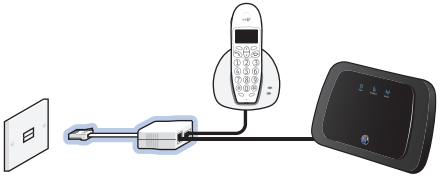
A broadband (ADSL) master socket looks like this:



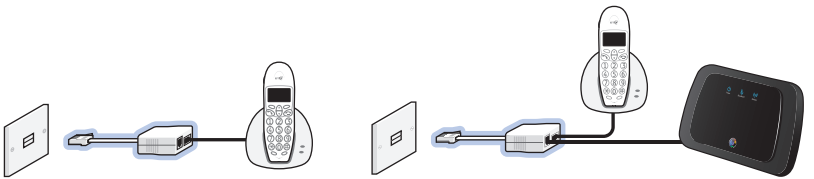
## Q Fitting filters – what do I do?

Follow the example below that most closely matches your home set-up.

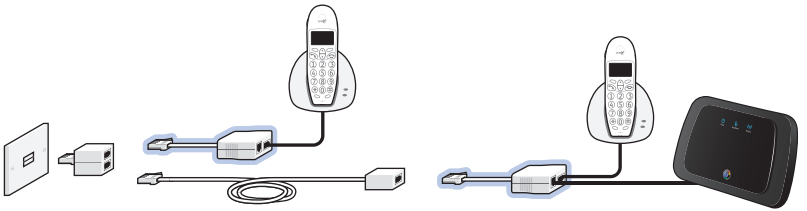
### One socket



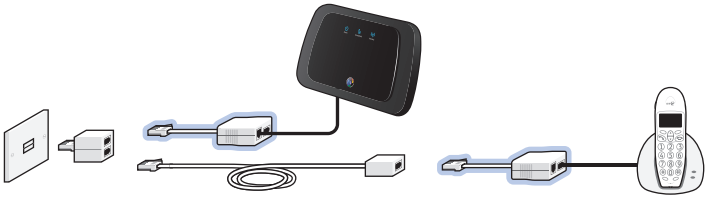
### More than one socket



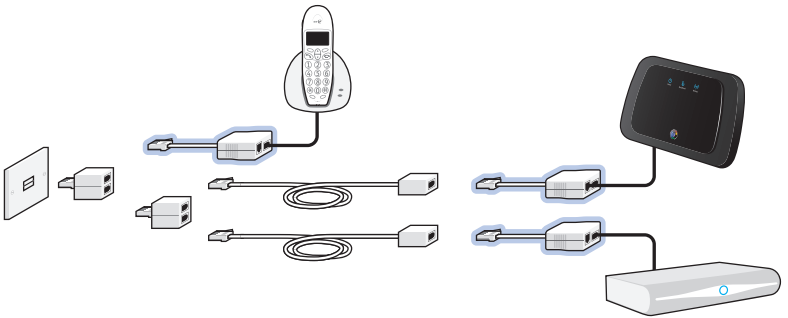
### One socket – phone near socket, extension lead/doubler runs to Hub



## One socket near computer, extension lead doubler used for phone



## One socket – extension lead to Hub and extension lead to digital TV box



**Tips**

- You can connect a phone and Hub to the same ADSL filter.
- You can connect two phones to the same ADSL filter if you use a socket doubler.
- An ADSL filter should be at one or the other end of an extension lead only, not both.
- If you're using a phone extension lead for your Hub, the ADSL filter must be fitted at the same end as the Hub.

# Working with wireless

## Q How do I change the wireless channel on my Hub?

1 Access Hub Manager by typing **bthomehub.home** into the address bar of your web browser.

2 Click Settings.

3 If asked, enter your Hub Admin password.

4 In the Basic Settings menu, click Change the wireless channel to avoid interference.

5 Click the Refresh button.

6 Wait a minute for your Hub to select the best channel.

For more information on your Hub Manager, see page 10.

## Q My computer or device doesn't work with WPA. Can I still use wireless on my Hub?

It may be possible to upgrade your computer operating system or wireless adapter to support WPA. See the wireless adapter manufacturer's web site for more information. If your adapter or device only supports WEP, you can change your Hub to accept WEP wireless connections – see below.

## Q How do I change my Hub to accept WEP wireless connections?

WEP is a less secure wireless setting than WPA and WPA2 (i.e. it can be easier for someone to hack into your Hub's wireless connection and connect to your broadband).

If you're connected using wireless, you'll briefly lose your connection to the internet when you change your wireless settings.

To configure your Hub to accept WEP:

1. Access Hub Manager by typing **bthomehub.home** into the address bar of your web browser
2. Click Settings
3. Enter your Hub Admin password or if prompted set your own new password
4. Click Wireless, then click WEP (64/40 bits)
5. In the Wireless key (WEP) field, type in a new ten-character 'key' of your choice. Please don't enter the default WPA/WPA2 key that came with your Hub
6. Make a note of your new key and click Apply
7. Any devices already connected wirelessly to your Hub will be disconnected. To reconnect these, you'll need to reset their wireless connection using the new key you've just chosen

> For more information on your Hub Manager, see page 10
> If you need some help, please go to **www.bt.com/broadband/help/hub**
> For more information on wireless security, please go to **www.bt.com/help** and type 'wireless security' in the search box

## Q My computer is showing a message 'Windows cannot configure this wireless connection' when I try to set up a wireless connection. What can I do?

Your computer's pre-installed wireless software is preventing you from using the Windows standard wireless software. Find your computer's wireless software by hovering your mouse over the icons in your system tray (usually on the lower right-hand corner of the screen). If there's a wireless icon, right-click on it to run the wireless manager or utility. Or go to Start then All Programs and look through the list.

Once you find this software, you can use it to set up your wireless connection (your software's 'help' function may be useful, if you aren't sure how to do this) or there may be a tick box that allows Windows to control the wireless set-up. Then follow the instructions on page 16.

## Q I'm using a wireless adapter but can't get a wireless connection with my Hub. What do I need to do?

1. Using another computer that's connected to your Hub or, by first connecting your computer using the Ethernet cable (see below), access Hub Manager by typing **bthomehub.home** into the address bar of your web browser.
2. Click Settings.
3. If asked, enter your Hub Admin password.
4. Go to Wireless interface type and change it to a different setting (if you've found that the '802.11b/g/n recommended' option doesn't work, we suggest you select the '802.11 b/g' option instead – particularly if you're using a mix of b and g type wireless adapters).
5. Click Apply. You can now try to establish the wireless connection between the device and your Hub.

## Q How can I find out if my computer or device works with wireless?

Your BT Home Hub is already wireless enabled, so you just need to check that your computer, games console or other device can connect wirelessly.

If you've bought a laptop in the last couple of years, it's likely to have wireless built in, but you may need to turn it on using a button or switch on your laptop. If you use a normal desktop computer, this may also have wireless built in. If you aren't sure, check your laptop or desktop computer manual.

If your computer doesn't have wireless built in, you'll need to fit a wireless adapter. You can get one at **www.bt.com/shop** and most high street computer shops. Check your computer manual to make sure the type of adapter you plan to buy is compatible with your computer. We recommend that you get an 802.11n compatible wireless adapter, though an 802.11b or g wireless adapter will also work.

To find out more, and to see our simple guides to connecting these devices, go to **www.bt.com/wireless**

# Broadband speed and phone line

## Q What affects my broadband speed?

When you have too many things happening at once, the speed or quality of service you receive may be affected. If this happens, you may notice slower download rates and interruptions to streaming services, such as online videos or phone calls. This is normal and not a fault with your service but, to help fix this, simply reduce the number of things happening at the same time over your broadband line.

Your service can also be affected if the internet is busy, i.e. during peak times such as evenings and weekends when more people are online. If possible, try downloading large files or uploading photos during off-peak times.

If you're having speed problems, go to **www.bt.com/help/broadbandspeed**

## Q How can I try and reduce interference on my broadband line?

Consider getting a BT Broadband Accelerator. It's a clever device that fits on to certain main phone sockets and, by filtering out the interference from your home phone wiring, can improve line stability and give you a faster speed.

Order one at **www.bt.com/accelerator**. You only need to pay £1.30 to cover postage and packing.

Price shown includes VAT at 20%. VAT rate and prices may change. See www.bt.com for the latest prices.

## Other common questions

### Q I've been asked to type in my BT Yahoo! Mail address and password. What's this?

Your BT Yahoo! Mail address (also known as your BT Total Broadband username) and password were sent to you by email or letter when you ordered your broadband service. For more information about finding or resetting these details, go to **btyahoo.com** and click on 'Forgot password?' on the sign-in page.

### Q How do I dispose of old equipment?

If you've received your new Hub as a replacement for a faulty one, please return the faulty one together with its power cable using the returns envelope sent with the replacement.

If you don't have a returns envelope or you've other old electrical equipment you'd like to dispose of, please follow your local authority's recycling advice.

Before disposing of any such equipment, we recommend you reset it to its default settings – this should remove all your personal settings. To find out how to reset your Hub to its default settings, see page 12.

For more help, please go to **www.bt.com/help**

# Connection troubleshooting

The first thing to do if your connection isn't working is check your **Hub lights** and find out what to do using the table below.

| Hub light status | What's happening | What to do |
|---|---|---|
| Power light is off | There's a problem with your power supply or power is off | Check your power cable's plugged in correctly at the socket and that mains power is on.<br>Note: check your Hub's Power button is on |
| Power light briefly solid orange and then flashing orange | Hub is restarting | Wait until light turns blue – this can take a few of minutes |
| Power light is red | Hub has a problem restarting | Wait a few minutes. If light turns blue, all's okay. If light stays red, call us – see page 32 |
| Power light is orange | BT Power Save is active | You can wake up your Hub by pressing and releasing its Restart button.<br>For more about BT Power Save , see page 11 or go to www.bt.com/help |
| Power light is blue | Hub's Power supply is okay | Nothing – power's okay |
| Broadband light is off | There isn't a broadband connection | Check your Power light is blue and that your broadband cable's connected correctly.<br>Then press and release your Hub's Restart button.<br>If you've got a computer connected to your Hub, open your web browser for some help.<br>Or go to page 36 |
| Broadband light flashing orange, then purple and orange | Hub's connecting to broadband | Wait until light turns blue – this can take a few minutes. If it's still flashing after 24 hours, go to page 34 |
| Broadband light is flashing orange for more than a few minutes | Hub can't connect to broadband | Check you've got ADSL filters plugged in correctly in all your home's phone sockets.<br>Then press and release your Hub's Restart button.<br>Check service status on 0800 169 0199.<br>If you've got a computer connected to your Hub, open your web browser for some help |

Continued...

| Hub light status | | What's happening | What to do |
|---|---|---|---|
| | Broadband light is orange | Hub can't connect to broadband | Check you've got ADSL filters plugged in correctly in all your home's phone sockets. Check service status on 0800 169 0199.<br>If you've got a computer connected to your Hub, open your web browser for some help |
| | Broadband light is red | Broadband is active, but can't connect | Wait a few minutes. Then reset your broadband username in your Hub Manager at **bthomehub.home**. Note: if you're connecting to another broadband service your username will be different from the one we gave you.<br>If you've got a computer connected to your Hub, open your web browser for some help. Or go to page 35 |
| | Broadband light is blue | Hub's broadband is okay | You've a problem with your computer connection, go to page 38 |
|  | Wireless light is off | Wireless isn't active | If your Power light is orange, this means your Hub is sleeping in Power Save mode to save energy. You can wake up your Hub by pressing and releasing its Restart button.<br>If your Power light is blue, go to your Hub Manager at **bthomehub.home** to switch on wireless.<br>For more help, go to www.bt.com/help |
| | Wireless light is orange | Wireless security is off | It's a good idea to have your security on for your safety. Go to your Hub Manager at **bthomehub.home** to switch on security.<br>For more help, go to www.bt.com/help |
| | Wireless light is flashing orange | Hub is connecting to a device using wireless via WPS | Wait two minutes for your Wireless light to turn blue – it'll turn orange if security's off (see above to find out how turn security on). To find out more about WPS go to page 6.<br>For more help, go to www.bt.com/help |
|  | All lights are dimmed | Hub is sleeping in Power Save mode to save energy | Lights return to full power as soon as the Hub sees any activity. For more about BT Power Save, see page 11 or go to www.bt.com/help |
| | All lights are flashing blue | Password Override in progress | Wait two minutes for all lights to turn steady blue.<br>For more help, go to www.bt.com/help |

Still not working? If you've tried the table above or you find you're having to restart your Hub a lot, call us on 0800 111 4567.

To restart your Hub, press and release the **Restart** button on the back of your Hub. Wait for the Power light to turn blue.

**Note for the first 24 hours after set-up**
After you've installed your Hub, it can take up to 24 hours to establish the fastest, most reliable service possible on your line. During this time, the Broadband light may flash orange between periods of steady blue and your broadband service may be interrupted. This is normal. Please leave your Hub connected and turned on and it should settle down after 24 hours.

**...and the next ten days**
We'll also remotely test your line for up to ten days after your broadband is activated. This may occasionally interrupt your service, causing the Broadband light to flash orange. This is normal, and should settle down after ten days.

## Q What if my Broadband light is still flashing after 24 hours?

If your Broadband light's still flashing after 24 hours and you can't use your broadband service:

1. restart your Hub by pressing and releasing the Restart button on the back of the Hub
2. check that any extension sockets you're using have an ADSL filter fitted (see page 23)
3. if you're using an extension lead or extension socket, plug the ADSL filter and Hub directly into your main phone socket
4. unplug any other telephone devices (such as telephones, fax machines, digital TV boxes etc.) in your home, leaving only your Hub and its ADSL filter plugged in
5. if the Broadband light is now a steady blue, either your home's wiring or an ADSL filter may be faulty. Reconnect each ADSL filter and telephone device in turn, checking the Broadband light to find out if one is faulty. Also make sure that every telephone device that's plugged in uses an ADSL filter. If you moved your Hub, try moving it back. When the Broadband light is blue, and your computer is connected to your Hub, open your web browser – you should now be on the internet
6. if your Broadband light continues to flash, there may be a fault or interference on your line. Please call us on 0800 111 4567 (please make sure you're at your computer, and that it's turned on, when you call)

### Broadband light is red

Broadband is active, but your Hub can't connect to it.

1. If you're moving your broadband to BT, make sure it's after midnight on your broadband activation day. If it isn't, please wait until after this.
2. Check if anything, such as network maintenance, is affecting internet performance by calling broadband service status on 0800 169 0199.
3. If service is okay, restart your Hub by pressing and releasing the Restart button on the back of the Hub.
4. Wait a couple of minutes until the Broadband light glows blue and open your computer's web browser to check you're connected to the internet.
5. If the Broadband light is still red, try accessing the Hub Manager (see page 10), selecting Settings, then Internet and click Reset username.
6. If the Broadband light is still red, try resetting the Hub's default settings – see page 12.
7. If the Broadband light is still red, please call us on 0800 111 4567 (please make sure you're at your computer, and that it's turned on, when you call).

Note: the BT Home Hub will only work with a BT broadband service. If you aren't a BT Total Broadband customer, a red Broadband light on your Hub could mean your 'connection' username and password aren't configured correctly in your Hub Manager. To find out how to access your Hub Manager, see page 10.

### Broadband light is off

Broadband isn't active on your telephone line or there's a problem with the broadband signal reaching your Hub.

1. Make sure it's after midnight on your broadband activation day. If not, please wait until after this time.
2. If it's after midnight on your broadband activation day, check that the broadband cable (grey ends) is correctly inserted into your Hub's Broadband socket (grey).
3. Check that the other end of the broadband cable is correctly inserted into the ADSL filter's DSL socket, and that the ADSL filter is correctly plugged into your phone socket – see page 22.
4. Plug a phone into the Phone socket on the ADSL filter and listen for a dial tone.
5. Follow the appropriate instructions in the dial tone table on page 37.

### There's no dial tone:

1. try unplugging the filter and plugging your phone directly into the phone socket – if there's a dial tone this means there's a faulty ADSL filter. Try swapping the filter
2. if you're using an extension socket or extension lead, plug the ADSL filter directly into the main phone socket and listen again

**If there's now a dial tone at the main socket, but not at the extension:** the extension lead, wiring or socket is faulty. Please call us on 0800 800 151 or contact a qualified engineer for help.

You can try connecting your Hub to your main phone socket. If the Broadband light turns blue, your Hub's now connected to broadband. Connect your computer to your Hub and open your web browser

**If there's no dial tone at the main socket:** there's likely to be a problem with your telephone line. Please call us on 0800 800 151

### There is a dial tone:

1. check if anything, such as network maintenance, is affecting internet performance by calling broadband service status on 0800 169 0199. If service is okay, and you're using an extension lead or extension socket, plug the ADSL filter and Hub directly into the main phone socket
2. unplug any other telephone devices (such as telephones, fax machines, digital TV boxes etc.) in your home, leaving only your Hub and its ADSL filter plugged in

**If the Broadband light is now a steady blue:** either your home's wiring or an ADSL filter may be faulty. Reconnect each ADSL filter and telephone device in turn, checking the Broadband light, to find out if one is faulty. Also make sure that every telephone device that's plugged in uses an ADSL filter. If you moved your Hub, try moving it back. When the Broadband light is blue, and your computer is connected to your Hub, open your web browser – you should now be on the internet

**If the Broadband light is still off:** and today is your activation day, please wait until after midnight. If you still have no Broadband light after midnight, please call us on 0800 111 4567 (please make sure you're at your computer, and that it's turned on, when you call)

### Broadband light is blue

Your Hub is connected to broadband. The problem could be with your computer or its connection to your Hub.

To check if anything, such as network maintenance, is affecting internet performance, call our broadband service status line on 0800 169 0199. If there are no known issues in your area, try the following:

1 restart your Hub by pressing and releasing the Restart button on the back

2 restart your computer

3 wait for your Hub's Broadband light to turn steady blue

4 open your web browser and follow any on-screen troubleshooting instructions

If a dial-up window appears, see page 21.

5 if you're using a firewall, check it's not blocking your browser's connection to the internet. Try temporarily turning off your firewall and then restarting your browser. If you can now access the internet, there is a problem with your firewall settings. To fix this problem, see your firewall's help information

**6a if you're using a computer that's connected to your Hub using the Ethernet cable**

Check that this cable is inserted correctly by unplugging and plugging back in each plug.

> If you still can't connect, run your BT Total Broadband set-up CD, which will automatically correct these settings
> For more help, follow the manual set-up steps on page 19
> If your computer has a wireless connection, you can try setting it up. This may help you to get online. For more help with fixing connection problems, go to **www.bt.com/start**

### 6b if you're using wireless

Many things can affect a wireless connection, including settings on your computer, position of your computer and Hub in your home, and interference with the wireless signal. The following tips may help:

- check that your computer's wireless adapter is fitted and/or turned on. Some laptop computers have a small switch – please see your computer manual for help
- check your wireless connection software – it should show if your computer's connected to your Hub. Try hovering your mouse over the icons in your computer's system tray (usually on the lower right-hand corner of the screen) – one of these may indicate if your wireless is connected. Click or right-click on this to launch wireless manager
- try moving your computer closer to your Hub
- make sure the computer and Hub aren't close to large electrical appliances

If you still can't connect:

- try refreshing the wireless network channel – see page 25
- run your CD to automatically correct these settings

Note: if your computer has an Ethernet port, try plugging in the Ethernet cable. This may help you to get online. For more help with fixing connection problems, go to **www.bt.com/start**

7 If neither of the above solves this problem, please call us on 0800 111 4567 (please make sure you're at your computer, and that it's turned on, when you call)

## What to do if you're using your own router and have a problem

If you aren't using a BT Home Hub and have a connection problem, follow the troubleshooting advice below.

Please check the information supplied with your equipment – there may be a troubleshooting section. Your router's lights can often also help you identify a problem. If you're online and need help and advice, please go to **www.bt.com/help** or your router manufacturer's web site. If you're connecting your router to BT Total Broadband for the first time, see your **Getting Started** guide.

The following tips may also help:

- try restarting your router and computer – this fixes most connection problems
- make sure all cables are fitted correctly and plugged in securely
- make sure you've ADSL filters fitted to all the phone sockets on the broadband line
- try swapping the ADSL filter your router is plugged into with another, in case the filter is faulty
- if you're using an extension socket, check that it's working, i.e. plug a phone into the phone socket of the ADSL filter and listen for a dial tone
- if you're using an extension lead or extension socket, try connecting your router to the main socket. If this works, it may mean you've a problem with your extension wiring or extension lead
- if you're using wireless, try moving your computer closer to the router
- try changing the position of the router aerial (if fitted)
- make sure the computer and router aren't close to large electrical appliances
- try changing wireless channels (see your router instructions to find out how to do this)
- if you're using a firewall, check it's not blocking your browser's connection to the internet. Try temporarily turning off your firewall and then restarting your browser. If you can now access the internet, there is a problem with your firewall settings. To fix this problem, see your firewall's help information

Or, if you've a BT Home Hub available, you could disconnect your existing equipment and try using your BT Home Hub (see your **Getting Started** guide).

If you're still having problems, call 0800 169 0199 to check service status.
If service status for your area is okay:

- for router problems, contact your router manufacturer. See your router instructions for contact details
- for broadband line problems, call the 24-hour BT Total Broadband helpdesk on 0800 111 4567 (please make sure you're at your computer, and that it's turned on, when you call). Please note: we can provide support only for equipment provided by BT. If you'd like support for your own equipment, consider our BT Home IT Support service – see page 3

# Useful information

## Useful web site addresses

| | |
|---|---|
| MyBT: | www.bt.com/mybt |
| Help and support: | www.bt.com/help |
| Your Hub Manager: | bthomehub.home |

Password – see page 10.

## Jot down your details here

BT Total Broadband username:

BT Total Broadband password:

Your username and password are also your BT Yahoo! Mail address (email address) and password.

## Default Hub settings

| | |
|---|---|
| Broadband username (PPP): | bthomehub@btbroadband.com |
| Broadband password: | none required |
| Encapsulation: | PPPoA |
| Multiplexing: | VC based or VC Mux |
| Wireless network name/SSID: | |
| Wireless key: | |
| The factory settings are printed on your Hub's pull-out. Make a note of any changes here. | |
| Wireless interface: | wi-fi 802.11.b, g or n |
| Authentication: | WPA-PSK or WPA2-PSK (also known as WPA-Personal) |
| Encryption type: | AES or TKIP |
| Mode: | infrastructure (not ad hoc) |
| Hub Admin password: | |
| Your password's printed under your Hub and on its pull-out. Make a note of any changes here. | |

# The small print

## Warranty

Your BT Home Hub 3 will arrive fault-free and will work like it should for the minimum period of your contract. If during that time it stops working, and you've followed the advice on page 2, you should contact us. If we ask you to return it, we'll decide to replace or repair it – except if the fault's caused by general use, accidental or deliberate damage, not using it properly or not following the instructions in this User guide. If you return it, we may test it. If it's working, we'll send it back to you – but you might need to pay our testing and postage costs. This doesn't affect your legal rights.

## Safety and regulatory instructions for your BT Home Hub 3

**Please read this section carefully before set-up**

- Your Hub will get warm once connected to the power supply. Although this is normal, you should make sure that your Hub has adequate ventilation to prevent overheating. Never block the vents on your Hub.
- Don't expose your Hub to rain, water, moisture or direct sunshine.
- Don't spill liquid on your Hub.
- Keep your Hub away from sources of heat such as heaters or radiators.
- Don't try to disassemble or open up your Hub yourself. Not only will it make your warranty void, it may expose you to dangerous voltage or other hazards.
- Before cleaning your Hub, disconnect its power supply. Use a damp cloth for cleaning.
- For better performance, don't place your Hub on a television or computer monitor.
- If there's an electrical storm, you must unplug all of your equipment from the electricity supply and phone sockets.
- The BT Home Hub 3 intentionally generates low-level radio frequency signals and so there's a very small risk that it may interfere with sensitive medical devices, for example a heart pacemaker, when nearby. If you've any concerns, we recommend that you consult the medical device manufacturer before using your BT Home Hub 3.
- The plug on the power cable serves as a disconnect device. Make sure that the power socket you plug the power cable into is easily accessible and located as close to the equipment as possible.

**Important:** please make sure you always use the power cable supplied with your new Hub – don't use any other power cable.

## Save energy

Please avoid wasting energy while using your computer, games console or other equipment. You can set up your computers to go into standby or low-energy mode automatically. Your Hub has BT Power Save – see **www.bt.com/help/homehub**

Please disconnect your Hub from its power supply when not in use for an extended period (e.g. a holiday), but remember that when you do so all connected computers (and any other devices that use your Hub to connect to your broadband line) will lose internet access. Remember to restore power to your Hub before turning on your computer(s).

## How to recycle your equipment

Your Hub is classed as Electrical or Electronic Equipment, so you shouldn't throw it out with normal household or commercial waste.

Instead, we recommend you ask your local council how to recycle it along with your kit. It's all part of the Waste Electrical and Electronic Equipment (WEEE) Directive (2002/96/EC) to recycle products using the best possible techniques, helping to minimise the environmental impact, treat hazardous substances safely and avoid too much landfill.

Before disposing of any such equipment, we recommend you reset it to its default settings – this should remove all your personal settings. To find out how to reset your Hub to its default settings, see page 12.

## Declaration of Conformance

Declaration of Conformance with European Community Directive 1999/EC.

This product is intended for use within the UK for connection to the public telephone network. This equipment complies with the essential requirements for Radio Equipment and Telecommunications Terminal Equipment Directive 1999/5/EC. The Declaration of Conformance can be found at **www.bt.com**

## GNU General Public License

The BT Home Hub 3 contains code that is covered by the GNU General Public License (GPL). In accordance with the GPL, BT has made the relevant code available for download at **www.btyahoo.com/broadband/adhoc_pages/gplcode.html**

## Terms and conditions

BT Total Broadband is covered by terms and conditions. To review these, go to **www.bt.com/terms**

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